# Installation Instructions

If you have questions, call 800.626.2000 or visit our website at: www.monogram.com

### **Built-In Dishwashers**

ZBD6800K ZBD6880K ZBD6890K\*

Design Guide with Installation Instructions

\*For ZBD6890 Series also refer to the instructions provided on the template packed with that model.



# **BEFORE YOU BEGIN**

Read these instructions completely and carefully.

- **IMPORTANT** Save these instructions for local inspector's use. Observe all governing codes and ordinances.
- Note to Installer Be sure to leave these instructions with the Consumer.
- Note to Consumer Keep these instructions with your Owner's Manual for future reference.
- Skill Level Installation of this dishwasher requires basic mechanical and electrical skills. Proper installation is the responsibility of the installer. Product failure due to improper installation is not covered under the GE Appliance Warranty.
- Completion Time 1 to 3 Hours. New installations require more time than replacement installations.

 IMPORTANT — The dishwasher MUST be installed to allow for future removal from the enclosure if service is required.

If you received a damaged dishwasher, you should immediately contact your dealer or builder.

### READ CAREFULLY. KEEP THESE INSTRUCTIONS.

# FOR YOUR SAFETY

Read and observe all CAUTION and WARNINGS shown throughout these instructions.

While performing installations described in this booklet, gloves, safety glasses or goggles should be worn.

For Monogram local service in your area, 1.800.444.1845. For Monogram service in Canada 1.888.880.3030 For Monogram Parts and Accessories, call 1.800.626.2002.

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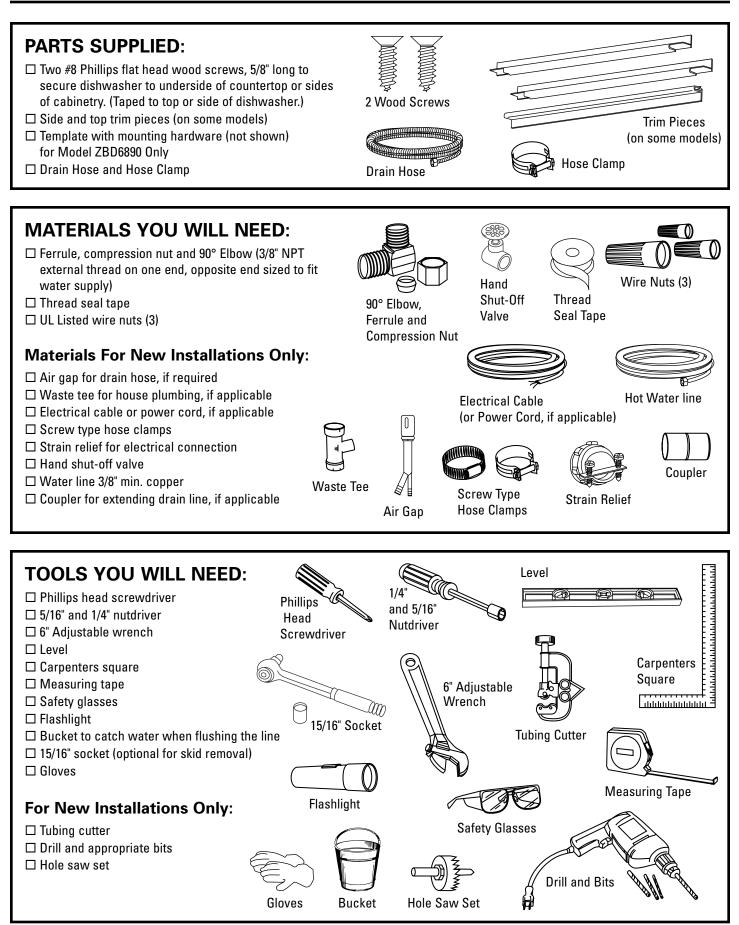
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#### **Custom Panel Dimensions**

Custom Panel for Model ZBD6890.....15

# **Installation Preparation**



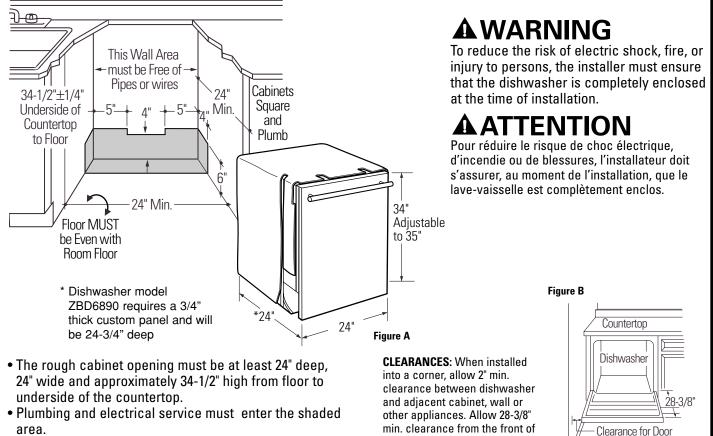
#### ADVANCE PLANNING

- These dishwashers are designed for versatility, adaptable to virtually any installation.
- All models have a full length door without the traditional access panel.
- These dishwashers may be installed beneath countertops of stone or other materials that will not accept screws. No trim kit required.

PREPARE DISHWASHER ENCLOSURE

#### **DISHWASHER MODELS**

ZBD6880 SS, Stainless Steel ZBD6800 BB, Black ZBD6800 WW, White ZBD6890 Requires a 3/4" custom panel and custom handle



• The dishwasher must be installed so that drain hose is no more than 10 feet in length for proper drainage.

other appliances. Allow min. clearance from the the dishwasher for door opening (Figure B).

Opening 2" Minimum

4

#### DRAIN REQUIREMENTS

- Follow local codes and ordinances.
- Do not exceed 10 feet distance to drain.
- Do not connect drain lines from other devices to the dishwasher drain hose.

**NOTE:** This dishwasher is equipped with a high drain loop. There is no minimum height required for drain hose routing. However, 18" minimum from floor to center of waste tee or disposer inlet is required. See Figure D.

#### **DETERMINE DRAIN METHOD**

The type of drain installation depends on the following question.

Do local codes or ordinances require an air gap?

□ Is waste tee less than 18" above floor?

# If the answer to either question is YES, Method 1 MUST be used.

• If the answers are NO, either method may be used.

#### **CABINET PREPARATION**

• Drill a 1-1/2" dia. hole in the cabinet wall within the shaded areas shown in Figure A for the drain hose connection. The hole should be smooth with no sharp edges.

### **IMPORTANT** — When connecting

drain line to disposer, check to be sure that drain plug has been removed. DISHWASHER WILL NOT DRAIN IF PLUG IS LEFT IN PLACE.



Remove

Hopper

Plug

#### Method 1—Air Gap with Waste Tee or Disposer

An air gap must be used when required by local codes and ordinances. The air gap must be installed according to manufacturers instructions.

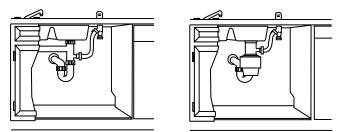
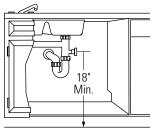


Figure C

# Method 2—Built-in "High Drain Loop" with Waste Tee or Disposer



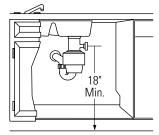


Figure D

### PREPARE ELECTRICAL WIRING



### WARNING

**FOR PERSONAL SAFETY:** Remove house fuse or open circuit breaker before beginning installation. Do not use an extension cord or adapter plug with this appliance.



# ATTENTION

**SÉCURITÉ** : Enlever le fusible du circuit ou déclencher le disjoncteur avant de commencer l'installation. Avec cet appareil, ne pas utiliser une rallonge ou un adaptateur de prise.

#### **Electrical Requirements**

- This appliance must be supplied with 120V, 60 Hz., and connected to an individual properly grounded branch circuit, protected by a 15 or 20 ampere circuit breaker or time delay fuse.
- Wiring must be 2-wire with ground and rated for 75°C (176°F).
- If the electrical supply does not meet the above requirements, call a licensed electrician before proceeding.

#### Grounding Instructions—Cable Direct

This appliance must be connected to a grounded metal, permanent wiring system, or an equipment grounding conductor must be run with the circuit conductors and be connected to the equipment grounding terminal or lead on the appliance.

#### Grounding Instructions—Power Cord Models

This appliance must be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. This appliance is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is installed and grounded in accordance with all local codes and ordinances.



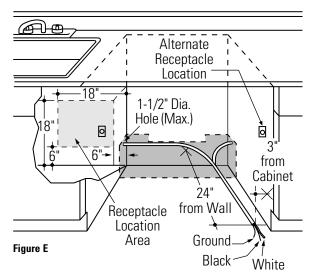
# WARNING

The improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service representative if you are in doubt that the appliance is properly grounded.



### **ATTENTION**

Le mauvais branchement du conducteur de mise à la terre peut causer des risques de choc électrique. En cas de doute sur la mise à la terre de l'appareil, consulter un électricien agrée ou un technicien de réparation.



For models equipped with power cord: Do not modify the plug provided with the appliance; if it will not fit the outlet, have a proper outlet installed by a qualified technician.

#### **Cabinet Preparation and Wire Routing**

- The wiring may enter the opening from either side, rear or the floor within the shaded area.
- Cut a 1-1/2" max. dia. hole to admit the electrical cable. Cable direct connections may pass through the same hole as the drain hose and hot water line, if convenient. If cabinet wall is metal, the hole edge must be covered with a bushing.

**NOTE:** Power cords with plug must pass through a separate hole.

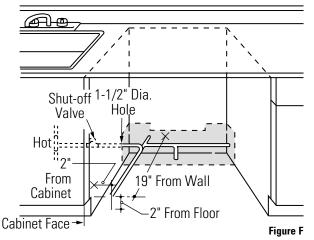
#### **Electrical Connection to Dishwasher**

Electrical connection is on the right front of dishwasher.

- For cable direct connections the cable must be routed as shown in Figure E. Cable must extend a minimum of 24" from the rear wall.
- For power cord connections, install a 3-prong grounding type receptacle in the sink cabinet rear wall, 6" min. or 18" max. from the opening, 6" to 18" above the floor.

### PREPARE HOT WATER LINE

- The line may enter from either side, rear or floor within the shaded area shown in Figure F.
- The line may pass through the same hole as the electrical cable and drain hose. Or, cut an additional 1-1/2" dia. hole to accommodate the water line. If power cord with plug is used, water line must not pass through power cord hole.



#### Water Line Connection

- Turn off the water supply.
- Install a hand shut-off valve in an accessible location, such as under the sink. (Optional, but strongly recommended and may be required by local codes.)
- Water connection is on the left side of the dishwasher. Install the hot water inlet line, using no less than 3/8" O.D. copper tubing. Route the line as shown in Figure F and extend forward at least 19" from rear wall.
- Adjust water heater for 120°F to 150°F temperature.
- Flush water line to clean out debris.
- The hot water supply line pressure must be 20-120 PSI.

# CAUTION

Do not remove wood base until you are ready to install the dishwasher. The dishwasher will tip over when the door is opened if the wood base is removed.

# PRUDENCE

Il ne faut pas enlever la base de bois avant d'être prêt à installer le lave-vaisselle. Quand la base de bois est enlevée et la porte ouverte, le lave-vaisselle bascule.



# **BEFORE YOU BEGIN**

Locate and set aside the two Phillips head mounting screws wrapped with yellow tape and stuck to the top or side of the dishwasher.

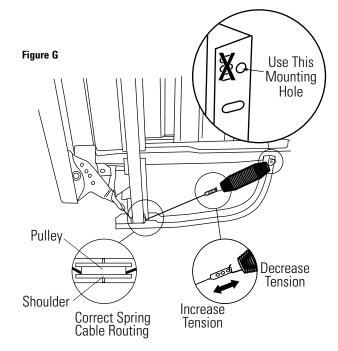
### **STEP 1 CHECK DOOR BALANCE**

- With dishwasher on the wood skid, check the door balance by opening and closing the door.
- If the door drops when released, increase the spring tension. If the door rises when released, decrease the tension.

**NOTE:** The addition of the custom panel on model ZBD6890 will require exchange of the factory installed springs. Use the heavy-duty springs provided. See the custom panel template for additional instructions.

• Position the spring for increased or decreased tension as required.

**NOTE:** Adjust both balance springs to the same amount of tension to prevent excessive door twisting during use.

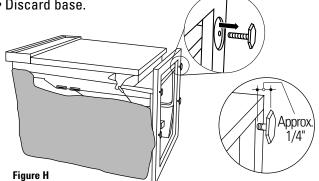


**TIP:** If door does not open easily or falls too quickly, check the spring cable routing. Check that the cable is properly aligned on the pulley (as shown).

#### **STEP 2** REMOVE WOOD BASE, **INSTALL LEVELING LEGS**

#### **IMPORTANT** — Do not kick off wood base! Damage will occur.

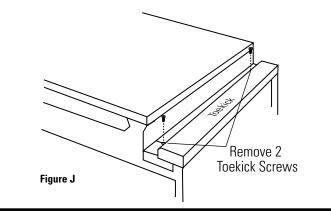
- Move the dishwasher close to the installation location and lay it on its back.
- Remove the four leveling legs on the underside of the wood base with an adjustable wrench or 15/16" socket.
- Discard base.



 Screw leveling legs back into the dishwasher frame, approximately 1/4" from frame as shown.

### **STEP 3 REMOVE TOEKICK**

Remove the two toekick screws.

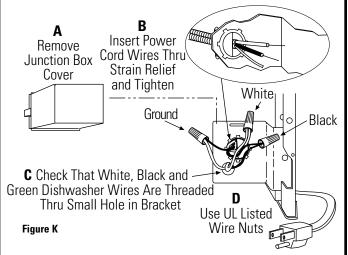


#### STEP 4 INSTALL POWER CORD

#### Skip this step if dishwasher will be direct wired or has a factory installed power cord.

The power cord and connections must comply with the National Electrical Code, Section 422 and/or local codes and ordinances.

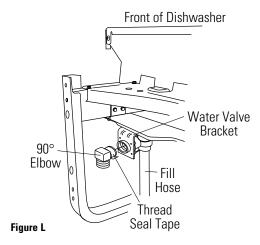
• Maximum power cord length is 4 feet beyond the back of the dishwasher.



- Connect incoming power cord white (or ribbed) to dishwasher white, black (or smooth) to black and ground to dishwasher green wire. Use UL listed wire nuts of appropriate size.
- Replace junction box cover. Be sure wires are not pinched under the cover.

### STEP 5 INSTALL 90° ELBOW

- Wrap 90° elbow with thread seal tape.
- Install a 90° elbow onto the water valve.

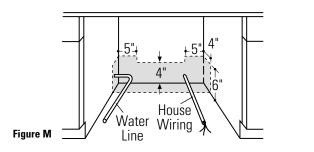


- Do not overtighten 90° elbow, water valve bracket could bend or water valve fitting could break.
- Position the end of the elbow to face the rear of the dishwasher.

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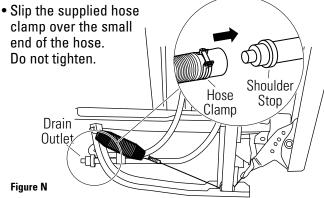
#### STEP 6 POSITION WATER LINE AND HOUSING WIRING

• Position water supply line and house wiring on the floor of the opening to avoid interference with base of dishwasher and components under dishwasher.

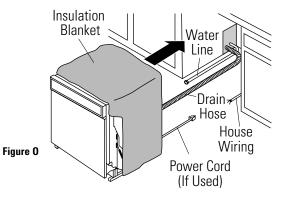


#### STEP 7 INSTALL DRAIN HOSE, GUIDE THROUGH CABINET

- Remove tape and wire tie holding the clamp to the drain hose. Be careful not to damage the drain hose.
- Stand the dishwasher upright.



- Push hose over the drain outlet on the back side of the dishwasher. See illustration. Push the hose over the outlet and against the shoulder stop.
- Tighten the hose clamp with a 1/4" nut driver.



• Position the dishwasher in front of the opening. Insert drain hose into the cabinet side. If power cord is used, guide the end through a separate hole.

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#### STEP 8 SLIDE DISHWASHER PARTIALLY INTO CABINET

# DO NOT PUSH AGAINST FRONT PANEL WITH KNEES. DAMAGE WILL OCCUR.

• Slide dishwasher into the opening a few inches at a time.

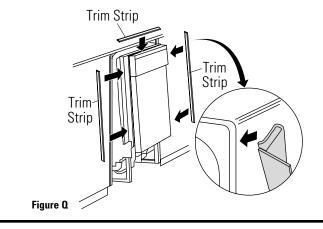


- As you proceed, pull the drain hose through the opening under the sink. Stop pushing when the dishwasher is a few inches forward of adjacent cabinetry.
- Make sure drain hose is not kinked under the dishwasher and there is no interference with the water line and wiring or any other component.

### **STEP 9** INSTALL TRIM PIECES

# Skip this step if trim is not supplied with the dishwasher.

- Locate trim strips inside dishwasher.
- Press trim onto the tub flange on each side. Start with the top edge, pressing on as you move towards the bottom.
- Press the two top trim pieces on each side of the latch.
- Open and close the door to check that trim does not bind and does not interfere with door latch.



### **STEP 10 POSITION DISHWASHER UNDER COUNTERTOP**

- Push the dishwasher into the cabinet.
- Push at the sides with your hands. Do not use your knee against the door since door damage will occur.
- Check that the tub insulation blanket does not get "bunched-up" or interfere with the springs as you slide it into the cabinet.
- Center the dishwasher in the opening.
- Check that the edges of the dishwasher door are behind the cabinet frame and aligned with the front face of the cabinet as shown.
- Carefully open and close the door to ensure that the door panel does not catch or rub on the cabinet frame.
- If the door catches or rubs on the frame, reposition and/or level the unit (see Step 11) until the door moves freely and does not contact the cabinet frame.

The controls are designed to be hidden by your countertop. Align the dishwasher as shown in Figure T.

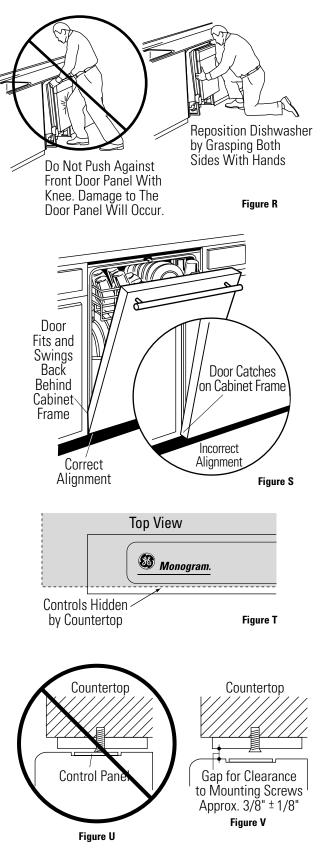
**TIP:** For best appearance installations of the ZBD6890 models, it may be necessary to cut off the back panel of the tub insulation blanket so that the dishwasher door panel can be aligned flush with the kitchen cabinet panels.

**NOTE:** If the drain hose gets trapped between the wall and the back side of the dishwasher, it can prevent the dishwasher from sliding all the way back into the cabinet opening, and thus preventing a flush fit with the kitchen cabinet panels.

**NOTE:** If this dishwasher is replacing an existing dishwasher, the old counter top bracket screw holes may not be in the correct position to accept a top control model. New holes may be required.

**TIP:** The leveling legs can be used to increase or decrease the amount of gap between the controls and the countertop affecting the visibility of the controls.

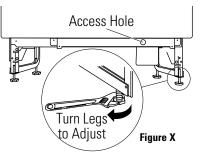
**IMPORTANT** — Leave enough gap between the controls and the countertop brackets so that the screwheads do not contact and scratch the controls.



# STEP 11 LEVEL DISHWASHER

**IMPORTANT** — Dishwasher must be level for proper dish rack operation and wash performance.

- Place level on door and rack track inside the tub as shown to check that the dishwasher is level. Check Level Check Front Level to Back Side To Side 9 ÓD **Figure W**
- Level the dishwasher by adjusting the four leveling legs individually.
- If adjustment to the right rear leveling leg is required, gain access by loosening



junction box bracket screw (through the access hole) and rotate bracket clockwise.

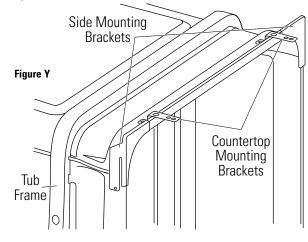
**TIP:** Pull lower rack out, about halfway. Check to be sure the rack does not roll forward or back into dishwasher. If the rack rolls in either direction, the dishwasher must be leveled again.

• If the door hits the tub, the dishwasher is not installed correctly. Adjust leveling legs to align door to tub.

### **STEP 12 SECURE DISHWASHER TO CABINET**

The dishwasher must be secured to the countertop or the cabinet sides. When countertops are made of wood, use Method 1. When countertops are granite or other materials that will not accept screws, use Method 2 to secure dishwasher at the sides.

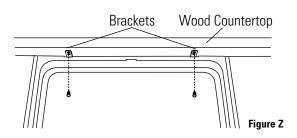
**IMPORTANT** — After leveling, verify that the dishwasher is still in the correct position shown in Step 10.



**IMPORTANT** — Drive screws straight and flush. Protruding screw heads will scratch the top or sides of the control panel and can interfere with door closing.

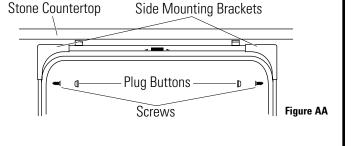
# Method 1—Secure dishwasher to wood countertop

• Fasten the dishwasher to the underside of the countertop with 2 Phillips screws provided.



# Method 2—Secure dishwasher with side mounting brackets

- Remove plug buttons (one on each side).
- Install screw through the hole in the side of the dishwasher and into the adjacent cabinet. Reinstall plug buttons.



### STEP 13 CONNECT WATER SUPPLY

Connect water supply line to 90° elbow.

- Slide compression nut, then ferrule over end of water line.
- Insert water line into 90° elbow.
- Slide ferrule against elbow and secure with compression nut.

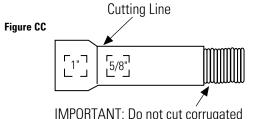
**IMPORTANT** — Check to be sure that door spring does not rub or contact the fill hose or water supply line. Test by opening and closing the door. Re-route the lines if a rubbing noise or interference occurs.

### Compression Nut Ferrule Hot Water 90° Elbow Supply Line 0 0 Figure BB 90° Elbow Door Spring

# STEP 14 CONNECT DRAIN LINE

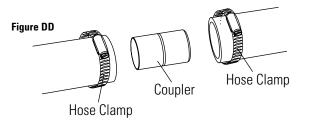
#### FOLLOW ALL LOCAL CODES AND ORDINANCES.

The drain hose molded end will fit 5/8" or 1" diameter connections on the air gap, waste tee or disposer. Cut on the marked line as required for your installation.



portion of hose

• If a longer drain hose is required, add up to 42" of length for a total of 10 ft. to the factory installed hose. Use 5/8" or 7/8" inside diameter hose and a coupler to connect the two hose ends. Secure the connection with hose clamps.



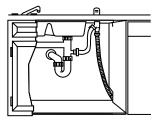
 Secure the drain hose to the air gap, waste tee or disposer with clamps.

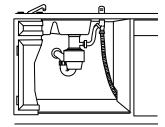
NOTE: TOTAL DRAIN HOSE LENGTH MUST NOT EXCEED 10 FEET FOR PROPER DRAIN OPERATION.

### DRAIN LINE INSTALLATION

• Connect drain line to air gap, waste tee or disposer using either previously determined method.

#### Method 1—Air gap with waste tee or disposer



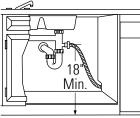


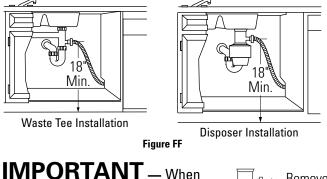
Waste Tee Installation

**Disposer Installation** 

#### Method 2—Built-in "High drain loop" with waste tee or disposer

**Figure EE** 





connecting drain line to disposer, check to be sure that drain plug has been removed. DISHWASHER WILL NOT DRAIN IF PLUG IS LEFT IN PLACE. \_Remove Hopper Plug

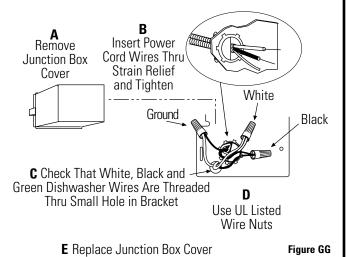
**TIP:** Avoid unnecessary service call charges. Always be sure disposer drain plug has been removed before attaching dishwasher drain hose to the disposer.

### **STEP 15 CONNECT POWER SUPPLY**

#### Skip this step if equipped with power cord. Go to step 16.

#### Verify that power is turned off at the source.

- Remove junction box cover "A".
- Secure house wiring to the back of the junction box with a strain relief "B".
- Locate the three dishwasher wires, (white, black and green) with stripped ends. Insert dishwasher wires through the small hole in the junction box "C". Use wire nuts to connect incoming ground to green, white to white and black to black "D".
- Replace junction box cover "E". Check to be sure that wires are not pinched under the cover.





## WARNING

If house wiring is not 2-wire with ground, a ground must be provided by the installer. When house wiring is aluminum, be sure to use UL Listed anti-oxidant compound and aluminum-to-copper connectors.



# ATTENTION

Si le circuit de la maison n'est pas un circuit à deux fils plus fil de terre, l'installateur doit installer un fil de terre. Quand le circuit de la maison est en aluminium, il faut prendre soin d'utiliser

une pâte antioxydante et des connecteurs aluminium à cuivre sur la liste UL.

### STEP 16 PRE-TEST CHECK LIST

Review this list after installing your dishwasher to avoid charges for a service call that is not covered by your warranty.

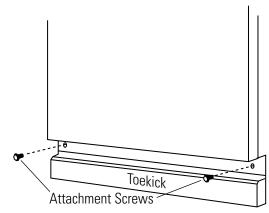
- □ Check to be sure power is OFF.
- Open door and remove all foam and paper packaging.
- □ Locate the Owner's Manual in the literature package.
- □ Read the Owner's Manual for operating instructions.
- Check door opening and closing. If door does not open and close freely or tends to fall, check spring cable routing and spring adjustments. See Step 1.
- □ Check to be sure that wiring is secure under the dishwasher, not pinched or in contact with door springs or other components. See Steps 8 and 10.
- □ Check door alignment with tub. If door hits tub, level dishwasher. See Step 11.
- Pull lower rack out, about half way. Check to be sure it does not roll back or forward on the door. If the rack moves, adjust leveling legs. See Step 11.
- Check door alignment with cabinet. If door hits cabinet, reposition or relevel dishwasher. See Steps 10, 11 and 12.
- Check that door spring does not contact water line, fill hose, wiring or other components. See Step 13.
- Verify water supply and drain lines are not kinked or in contact with other components. Contact with motor or dishwasher frame could cause noise. See Steps 6 and 8.
- □ Turn on the sink hot water faucet and verify water temperature. Incoming water temperature must be between 120°F and 150°F. A minimum of 120°F temperature is required for best wash performance. See "Prepare Hot Water Line," page 7.
- □ Add 2 quarts of water to the bottom of the dishwasher to lubricate the pump seal.
- □ Turn on water supply. Check for leaks. Tighten connections if needed.
- Remove protective film if present from the control panel and door.

#### **STEP 17 DISHWASHER WET TEST**

- Turn on power supply (or plug power cord into outlet, if equipped).
- □ Start the unit to check for leaks.
  - Push RINSE ONLY pad.
  - Push START/RESET pad one time.
  - Close door.
- Check to be sure that water enters the dishwasher. If water does not enter the dishwasher, check to be sure that water and power are turned on.
- Check for leaks under the dishwasher. If a leak is found, turn power supply off, then tighten connections. Restore power after leak is corrected.
- Check for leaks around the door. A leak around the door could be caused by door rubbing or hitting against adjacent cabinetry. Reposition the dishwasher if necessary. See Step 12.
- The dishwasher will drain and turn off about
  5 minutes after it was started. Check drain lines.
  If leaks are found, turn power off at the breaker
  and correct plumbing as necessary. Restore power
  after corrections are made. See Step 14.
- Open dishwasher door and make sure most of the water has drained. If not, check that disposer plug has been removed and/or air gap is not plugged. See Step 14. Also check drain line for kinking.
- □ Run the dishwasher through another "Rinse Only" cycle. Check for leaks and correct if required.

#### STEP 18 REPLACE TOEKICK

• Place toekick against the legs of the dishwasher.



#### Figure HH

- Align the toekick with the bottom edge and make sure it is against the floor.
- Insert and tighten the two toekick attachment screws. The toekick should stay in contact with the floor.

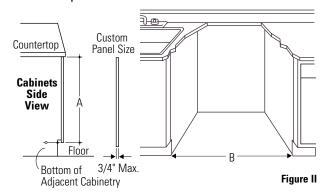
**TIP:** Make sure toekick is against floor to minimize noise.

#### **STEP 19 LITERATURE**

• Be sure to leave complete literature package and installation instructions with the consumer.

# CUSTOM PANEL FOR MODEL ZBD6890

This dishwasher requires a field installed 3/4" thick custom panel and custom handle. An installation template is packed with these models and may be obtained in advance. Order Pub. No. 31-30569. Complete panel installation instructions are included on the template.



#### STEP A—Determine custom panel height

- 1. Measure dimension A, from the underside of the countertop to the bottom of adjacent cabinets.
- 2. Subtract 1/4". This allows a 1/4" clearance gap between the underside of the countertop and the top of the dishwasher door.

#### HEIGHT = A - 1/4"

**NOTE:** 30-1/16" minimum panel height is required to cover the door frame. Panel height varies depending on installation. Consideration must be given to door swing clearance above the toekick.

#### STEP B—Determine custom panel width

1. Measure dimension B, the rough opening width.

2. Subtract 1/4" for clearance (1/8" on each side).

WIDTH = B - 1/4"

**NOTE:** The most common panel dimensions are 30-1/4"H and 23-3/4"W.

**IMPORTANT:** To ensure optimum door balance performance, it is recommended that the door panel weight be no more than 14 lbs.

**NOTE:** While performing installations described in this book, safety glasses or goggles should be worn.

For Monogram<sup>®</sup> local service in your area, call 1.800.444.1845.

**NOTE:** Product improvement is a continuing endeavor at General Electric. Therefore, materials, appearance and specifications are subject to change without notice.



GE Consumer Products General Electric Company Louisville, KY 40225

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